Methods: We observed 407 patients with T2DM after elective percutaneous coronary intervention (PCI). Patients were divided into three groups based on early morning urinary albumin: negative urinary albumin group (n=325), trace urinary albumin group (urine dipstick trace, n=41), and positive urinary albumin group (urine dipstick ≥1+, n=41). Kaplan-Meier curve analysis was used to compare the cumulative rates of clinical outcomes (all cause death; cardiac death; MACE: cardiac death, myocardial infarction, stroke or revascularization; cardiac-cerebral diseases rehospitaliation) during the 25-month (IQR: 17-37 month) follow-up. Cox regression was performed to assess risk factors of all cause death.
Results: Inhospital death occurred in 3 patients (0.7%), including 1 (0.3%) in the negative albuminuria group, 2 (4.9%) in the trace group, and 0 (0 %) in the positive group (P =0.324). Positive albuminuria was related with the occurrence of acute heart failure, acute kidney injury and dialysis during hospitalization. The cumulative rates of all-cause death (35.1% vs.11.3% vs. 6.3% , log rank P<0.001; negative vs. trace: P=0.184, negative vs. positive: $P^{\dagger}$< 0.001,trace vs. positive: P= 0.025), cardiac death (30.3% vs.8.2% vs. 5.2%,log rank P<0.001; negative vs. trace: P=0.384, negative vs. positive: $P^{\dagger}$< 0.001,trace vs. positive: P^{δ}= 0.020) and cardiac-cerebral diseases rehospitaliation (69.1% vs.41.2% vs. 37.0% , log rank P<0.001; negative vs. trace: P=0.543, negative vs. positive: P< 0.001, trace vs. Positive: P= 0.036) were higher in the albumin positive group compared with the trace and negative groups and there was significant difference between groups MACE (49.6% vs.31.6% vs. 31.6% , log rank P<0.001). After adjusting for potential confounding risk factors, urinary ablumin (HR=1.903, 95%CI 1.284-2.820, P =0.001) remained significantly associated with all cause death, meanwhile age >65 years, LVEF<40%, eGFR <60 ml/min/1.73 m^2 and acute kidney injury were predictive risk factors for all cause death.
Conclusions: Preprocedural albuminuria indicated poor clinical outcomes, and was predictive risk factors for all cause death in patients with T2DM after elective pecutaneous coronary intervention.

GW25-e3288

The correlation between balloon release pressure and no-reflow in acute myocardial infarction undergoing direct PCI

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Objectives: Balloon release pressure may increase the incidence of no reflow after direct percutaneous coronary intervention (PCI). This randomized controlled study designed to analyze the correlation between balloon release pressure and no-reflow in acute myocardial infarction (AMI) patients undergone direct PCI.
Methods: There were 156 acute myocardial infarction patients underwent PCI from January 1 2010 to December 31 2012 were divided into two groups according to the stents inflation pressure. They were conventional pressure group and high pressure group. After PCI, angiography was operated to assess the thrombolysis in myocardial infarction (TIMI) grade with related artery. Examinations were undertaken on all patients before and after operation including cardiac enzymes, total cholesterol, low-density lipoprotein, blood glucose, homocysteine, β-thromboglobulin (β-TG), Hamilton depression scale (HAMD) and Self-rating anxiety scale (SAS). After interventional therapy, afore-mentioned parameters in conventional pressure group and high pressure group were analyzed.
Results: The results showed that CK-MB, HAMD, SAS have significant difference (P<0.05) in all patients after PCI, especially in CK-MB of high pressure group (25.7±7.6 vs. 76.7±11.8U/L). Furthermore, CK-MB, HAMD, SAS, β-TG were comparative before PCI but they have significant changes (P<0.05) after intervention done. No-reflow phenomenon occurred in 13 patients in high pressure group, which was severely higher than conventional pressure group (17.11 vs. 6.25%, P<0.05).
Conclusions: In stent implantation, using a pressure less than 1823.4 kPa balloon to release pressure may be the better choice to reduce the occurrence rate of no reflow during direct PCI.

GW25-e3376

Cardiac risk assessment in patients with coronary artery disease in noncardiac surgery

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Objectives: To study the risk of cardiac complications after noncardiac surgery in patients with coronary artery disease (CAD), suffering from different tumors and undergoing different surgical procedures.
Methods: In this study, 128 patients were involved from 01/2009 to 12/2013 in the ICU of Shanxi Tumor Hospital, including 75 males and 53 females with a mean age of 68 years old. All patients had known CAD which has been confirmed preoperatively by angiogram. During angiogram, it was found that 298 coronary arteries were diseased with stenosis ranging from 50% to 100% (table 1).All patients had been diagnosed with tumors and undergone different surgical procedures (table 2).The cardiovascular complications were monitored closely by measures of significant arrhythmia, Acute Coronary Syndrome (ACS, including unstable angina, AMI and cardiac arrest), acute heart failure, cardiac shock and cardiac death.All the patients were monitored by measures of: (1) Life signs (temperature, pulse rate, respiratory rate and blood pressure). (2) Bedside ECG (twice a day) and B-type Natriuretic Peptide (BNP) and Troponin-I (TNI). (3) Electrolyte balance status. (4) Fluid balance status. (5) Intraoperative Hemodynamic status. (6) Types of General Anesthesia (GA) (7) Duration of operation.
Results: From this study, it was found that BNP elevated in 46 cases, and TNI in 32 Cases. Cardiovascular events were recorded in 30 cases (account for 24%) including 5 cases of cardiac death (account for 4%), 4 cases of ACS, 5 cases of significant arrhythmia (account for 4%), 20 cases of Heart failure (account for 16%).This study clearly suggested that the risk of cardiovascular events was closely related to the age, sex, severity of coronary stenosis, hemodynamics status during general anesthesia, post-operation fluid positive balance status, electrolyte imbalance and the location of the tumor. However, this study didn't show any significant relationship to the size of operation, duration of the operation and the types of GA (intravenous anesthesia, intravenous and inhalation combination anesthesia).
Conclusions: Preoperative cardiovascular assessment was necessary for patients with CAD who was going to undergo noncardiac surgery. It was equally important to monitor the hemodynamic status and life signs perioperatively, maintain fluid and electrolyte balance strictly after the operation. It's concluded that: (1) Elderly patients especially female had higher risks of complications. (2) the severer of the stenosis of the coronary artery was, the higher the risk. (3) positive fluid balance was a higher risk of complications. (4) electrolyte imbalance resulted in higher risk.

GW25-e4290

Efficacy and Safety of limus-eluting stent versus paclitaxel-eluting stent in patients with diabetes mellitus undergoing percutaneous coronary intervention: A meta-analysis

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Objectives: To compare the safety and efficacy of Limus-eluting stents (LES) and paclitaxel-eluting stents (PES) in patients with diabetes mellitus (DM) undergo percutaneous coronary intervention.
Methods: Recent data on drug-eluting stents have shown improved clinical outcomes in patients with diabetes mellitus. But, the relative efficacy and safety of different generation LES (including everolimus, zotarolimus, and sirolimus) compared with paclitaxel-eluting stents (PES) remains controversial. Therefore, a meta-analysis of clinical trials was performed to compare LES with PES in patients with diabetes.
Results: A total of 28 clinical trials were included in the present meta-analysis, involving 23,678 patients (9953 in the SES group, 4209 in the EES or ZES group, 9516 in the PES group). SES were significantly more effective in the reduction of target lesion revascularization in short-term (3.6% vs 6.3%, odds ratio [OR] 0.659, P=0.014), but no different in TVR, ST, MI, death or MACE (P>0.05). In the long term follow-up, there are no difference between the SES and PES in TLR, TVR, ST, MI, death or MACE (P>0.05). The second generation stent of LES, including EES and ZES, is better than PES in reduction of ST (2.1% vs 3.3%, odds ratio [OR] 0.586, P<0.001), MI (2.3% vs 4.1%, odds ratio [OR] 0.527, P=0.001), and MACE (8.0% vs 10.3%, odds ratio [OR] 0.796, P=0.007).
Conclusions: This meta-analysis demonstrates that, as compared to PES, the first generation of LES are similar in respect of MACE in short-term or long-term follow-up. But the second generation of LES is superior to PES in reducing the incidences of stent thrombosis, MI and MACE in patients with diabetes, with nonsignificant differences in terms of TLR, TVR and all cause of death.

GW25-e4594

IVUS-guided Wire Penetration Technique in Rechanneling of Coronary Chronic Total Occlusion Arteries

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Objectives: The aim of this study is to probe safety and efficacy of IVUS guided wire penetration technique in rechanneling of coronary chronic total occlusion arteries.
Methods: The inpatients, whose coronary angiography showed chronic total occlusion lesion while could not determine the wire progress orientation, were selected in this study. IVUS catheter were introduced to target vessel to help verifying the starting anatomy character of occluded segment and whether the guiding wire was in the true or false lumen, then guiding the progress of guiding wire. As IVUS showed the wire was in the true lumen of the occluded artery, proper stents were choose and placed according to the diameter and length of the lesion. Success rate, operation time, X-ray time, contrastor dosage was recorded. Complications such as coronary perforation, death, acute myocardial infarction, acute heart failure and cardiac tamponade were recorded during hospitalization and 6-month follow-up.